

STUDY GUIDE

Aerospace: The Flight of Discovery Chapter 2

Aviation Regulation

1. The Federal Aviation Administration (FAA) is the agency in charge of regulating airline safety.
2. The **Airline Deregulation Act of 1978** allowed airlines free entry to new air routes and to change their fares without government approval.

Types of Aviation

3. **General aviation** is defined as all civil aviation other than flying done by scheduled air carriers and government agencies.
4. All aircraft are placed into two major categories: **civil aviation** and **military aviation**.
5. **Business aviation** is a form of general aviation, which is done specifically for business purposes using aircraft owned by the business.
6. Business aviation, commercial aviation, personal aviation, and instructional aviation are categories of general aviation.
7. **Personal aviation** is the use of general aviation aircraft for private use.
8. The Narcotics and Dangerous Drugs Section of the Justice Department uses aircraft to patrol U.S. borders. This type of aviation is categorized as **government aviation**.
9. Air carriers are divided into three classes: major, national, and regional/commuter.
10. **Regional carriers** typically fly short to medium-length routes to cities that do not generate a great many passengers.
11. **Personal aviation** is the use of general aviation aircraft for other than business or commercial use.
12. Civil aviation is divided into two groups: **air carrier aircraft (civilian airlines)**, those civil aircraft flown by airlines on a regular scheduled basis, and **general aviation aircraft**, all civil aircraft used for other than regularly scheduled airlines.
13. Two major categories of aviation are **civil aviation** and **military aviation**.

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Types of Aircraft

14. The basic mission of a **fighter aircraft** is to destroy enemy aircraft.
15. The **C-141B Starlifter** is considered the backbone of America's strategic airlift, according to *Aerospace: The Flight of Discovery*.
16. The **Boeing 707** was the first U.S. commercial passenger jet.
17. **Regional/commuter carriers** take passengers within a certain limited geographical region.
18. Commercial aviation is divided into transportation and non-transportation areas. Examples of the non-transportation area are agricultural application, construction, and firefighting.
19. **Government aviation** is aviation conducted by any government body other than the military. Government aviation is not a part of general aviation.
20. Bombers such as the B-1B, B-52, and FB-111A are classified as **strategic bombers**. Aircraft that only perform tactical bombing duties such as the A-7 and A-10 are classified as **attack aircraft**. While **fighter aircraft** such as the F-15 and F-16 are primarily used to destroy enemy aircraft, they are also capable of performing tactical bombing duties.
21. **Military transport aircraft** have the basic mission of airlifting personnel and materiel to wherever they are needed.
22. Subcategories of military aircraft are: bomber, fighter/attack, transport and tanker, and reconnaissance and observation.
23. **Attack aircraft** are designed for air support of ground troops.
24. Most aircraft used for instructional purposes single engine.
25. **Tactical airlift** is defined as transportation within a theater of operation.
26. The F-117A was the world's first fighter to use stealth technology.
27. The MIG-29 is a Russian, twin-engine, single-seat, counterair fighter.
28. Strategic bombers have the mission of reaching into the enemy's homeland and destroying their ability to wage war.
29. Reconnaissance and observation aircraft watch an enemy, or potential enemy, to keep track of what he is doing.

Miscellaneous

- 30. **Tools** can best be described as implements or objects used in performing work.
- 31. In a commercial airliner, the passengers and cargo are considered the **payload**.
- 32. Most student pilots receive their basic flight instruction in small, two seat aircraft with a single engine. This is because these aircraft are cheaper to own and operate than larger, more complex aircraft.
- 33. An aircraft's **payload** is what the aircraft is designed to carry. The payload of an airliner is made up of passengers and cargo. The payload of a fighter aircraft consists of bombs, missiles and ammunition. The payload of an aerial tanker is fuel.
- 34. The average length of a trip for regional commuter airlines is 100 miles.
- 35. Before a student pilot flies solo, he/she must receive ground school, receive flight instruction, and pass an FAA Class III medical examination.